AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

COMPLETE LISTING OF CLAIMS:

Claims 1-12 : (Canceled)

Claim 13 : (Currently Amended) A catalyst composition for producing a polyethylene oxide polymer having a molecular weight range from 20,000 to 200,000 by direct polymerization economically in a high yield, wherein the catalyst composition ~~comprises~~ is a mixture of component A which is an organoaluminum compound having no Al-O bond and having an Al-C bond in the molecule and component B which is at least one kind of an alkali metal alkoxide compound or an alkali metal hydroxide compound.

Claim 14 : (Canceled)

Claim 15 : (Previously Presented) The catalyst composition as defined in claim 13, wherein the organoaluminum compound is one or more kinds selected from the group consisting of a trialkylaluminum compound and a tricycloalkylaluminum compound.

Claim 16 : (Previously Presented) The catalyst composition as defined in claim 15, wherein the trialkylaluminum compound is tri-isobutyl aluminum.

Claim 17 : (Previously Presented) The catalyst composition as defined in claim 13, wherein the alkali metal alkoxide compound is potassium t-butoxide.

Claim 18 : (Previously Presented) The catalyst composition as defined in claim 13, wherein the alkali metal hydroxyl compound is potassium hydroxide.

Claim 19 : (Previously Presented) The catalyst composition as defined in claim 13, wherein the component A is contained in an amount of 3 mol or more per mol of the component B.

Claim 20 : (Currently Amended) A method of producing polyethylene oxide comprising the steps of: using a catalyst composition capable of regulating to a desired molecular weight within a range of from 20,000 to 200,000, the catalyst composition ~~comprising~~ being a mixture of component A which is an organoaluminum compound having no Al-O bond and having an Al-C bond in the molecule and component B which is at least one kind of an alkali metal alkoxide compound or an alkali metal hydroxide compound, and using a polyethylene oxide having a relatively narrow molecular weight distribution and a relatively low molecular weight, said polyethylene oxide being characterized by a low polydispersity by regulating a ratio of the component A and the component B in the catalyst composition.

Claim 21 : (Previously Presented) The method of producing polyethylene oxide as defined in claim 20, wherein the molar ratio of the component A in the catalyst composition is regulated to 3 mol or more per 1 mol of the component B.

Claim 22 : (Previously Presented) The method of producing polyethylene oxide as defined in claim 20, wherein the amount of the catalyst composition used is 0.1 to 5.0 mol% of an Al atom based on ethylene oxide.

Claim 23 : (Previously Presented) The method of producing polyethylene oxide as defined in claim 20, wherein the amount of the catalyst composition used is 0.2 to 3.0 mol% of an Al atom based on ethylene oxide.

Claim 24 : (Previously Presented) The method of producing polyethylene oxide as defined in claim 20, wherein the amount of the catalyst composition used is 0.4 to 1.5 mol% of an Al atom based on ethylene oxide.